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## Mobility and retention of phenolic acids through a goethite-coated quartz sand column

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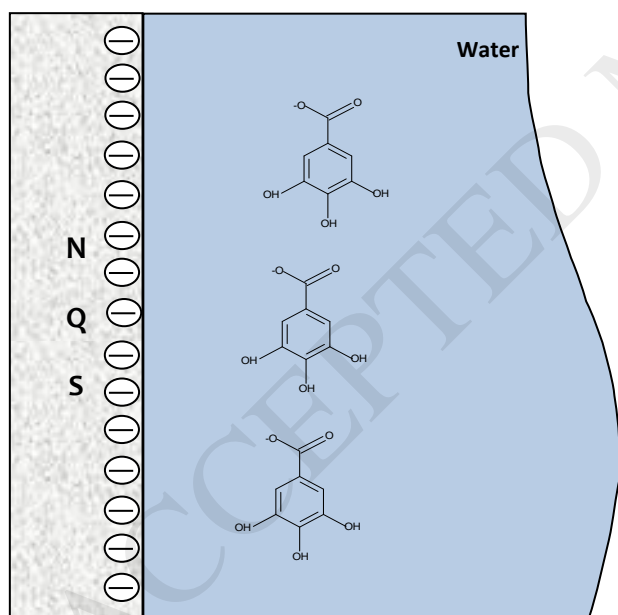
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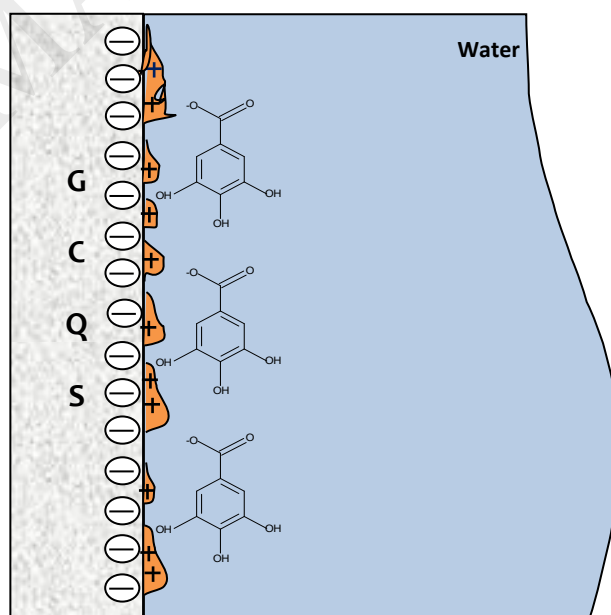
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### Graphical abstract

Natural Quartz Sand/Water interface




Goethite-Coated Natural Quartz Sand/Water



+ : Positive Charge

⊖ : Negative charge

 : Goethite

Adsorption of gallic acid from water onto Natural Quartz Sand, (NQS) (Left) and onto Goethite-Coated Natural Quartz Sand, GCQS (Right). Adding small amount of goethite to NQS leads to a several fold increase of the gallic adsorbed amount (Right).

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